extra work. The published researches on this subject are indeed by no means satisfactory, and we cordially agree with Dr. Parkes in wishing for new experiments. Perhaps Dr. Parkes himself, whose experiments have suggested the doubt, may be induced to supply the want. In doing so he would add materially to the deep debt of gratitude which every physiologist owes to him.—*Lancet*, Sept. 28, 1872.

6. *The Localization of Brain-Functions.*—Meynert, one of the ablest of the modern students of the anatomy of the nerve-centres, has sought, by combining phrenological with clinical and pathological observation on the functions of the cortical layer of the cerebral hemispheres, to define to some extent the localization of the different functions in the gray matter of the cortex. He distinguishes five special functional centres. 1. The olfactory lobe or nerve, which, highly developed in animals well gifted with the power of scent, is almost atrophied in man, less highly endowed in this respect. 2. The walls of the fissure of Sylvius. These are in intimate relation with the power of speech, as is found in aphasia, which is the consequence of changes in them. 3. The occipital and temporal lobes. Anatomy shows the relations of these parts with the organs of the senses—the retina, labyrinth, and olfactory nerve. In cases of blindness and deafness rapidly developed, these lobes are the seat of evident alterations. The experiments of Flourens on the ablation of the cerebral lobes support this theory; for, if but little of the substance be removed, the senses are not much affected; but if the ablation be carried deeper, the sensorial functions immediately cease. 4. The frontal lobes. These lobes are the principal seat of motor excitation, as is shown by their anatomical relations with the corpora striata. Besides, in the forms of psychoses which are accompanied by extensive disorders of motility (general paralysis), these are the most atrophied of all the parts of the brain. The continued need of movement, the agitation of mania, are equally based upon change in the frontal lobes. 5. The cornu of Ammon. This organ plays an important part in the functions of motility, and almost always presents, in epilepsy, conditions of atrophy or sclerosis.—*Brit. Med. Journ.*, Oct. 19, 1872.

7. *The Two Cerebral Hemispheres.*—Dr. Fleury, in a paper read before the French Association, compared the dynamism of the two cerebral hemispheres. Serre and Broca have for a long time pointed out the functional inequality of the two cerebral hemispheres, and a great number of clinical facts confirm their ideas. Gratiolet has observed the same inequality in the development of the brain in the fœtus. The left hemisphere excels the right. Dr. Fleury explains this functional inequality by the unequal distribution of blood in the cerebral hemispheres. Relying on the physical laws which regulate the course of the blood in the veins, and on the results of numerous measurements, he shows that the left hemisphere receives a more considerable quantity of blood than that which reaches the right hemisphere. The measurements taken of the jugular veins also confirm this opinion. Finally, we have to mention the agreement of a greater afflux of blood to the right superior limb.—*Brit. Med. Journ.*, Sept. 28, 1872.

8. *Mode of Growth of Long Bones.*—Dr. Ollier, of Lyons, communicated to the French Association for the Advancement of Science the results of his recent experiments on this subject. The theory of peripheric growth, which he has held for a long time, has been lately combated by the learned German doctors, Wolff, Calmann, and Meyer, who are supporters of interstitial growth. M. Ollier has observed anew a great many times that two nails placed on the diaphysis of a bone, at an accurately measured distance, are separated by the same space when the animal, having become an adult, is sacrificed. In very young animals, there is sometimes a slight divergence, never exceeding more than a fourth of the whole length of the bone. This fact would seem to weaken the theory, if one did not know that very young, and in consequence soft bones, are under the general law of growth of soft tissues, of which the development is interstitial. A more considerable divergence of the osteoplasts in adult

bones has also been made an objection to the theory of peripheric growth; but the researches of Ranvier have demonstrated the variableness of these elements, and in consequence their utter uselessness in this question. When the cartilage of conjugation is removed, the growth of the bone is stopped, or at least diminished. Interstitial growth is observed occasionally in certain birds, and in some mammals; but in this last case the anomaly explains itself, because the bone, softened by inflammation, has taken the properties of the soft tissues. Moreover, this growth is never more than a very small fraction of the length of the bone, which is the seat of it. Passing from the normal to the pathological growth of bone, M. Ollier remarked that since 1867 he has shown that irritation of the diaphyses of a long bone provokes the lengthening of this bone; whilst the irritation of the cartilage of conjunction leads to the arrest of its development, and that not by the more rapid solidification of the epiphysis, but by a simple perturbation in the work of ossification. The clinic confirms the results of experiment. Another fact, which has great practical importance, is the inequality of the part of the two cartilages of conjugation in the development of bone. The humerus grows especially by the superior cartilage of conjunction; the radius and the ulna, on the contrary, by their inferior cartilage, in such a way that the constituent parts of the elbow are only of very slight utility in the general development of the superior limb. The reverse takes place in the articulation of the knee and the bones which form it. M. Ollier insists on the importance of these facts, because of the results that attend articular resections practised on children. He has observed since 1861 that, after resections of the elbow in young children, the superior limb continues to grow, whilst the inferior limb hardly grows any more after resection of the knee. The deformity which results from this stoppage of the development is more and more exaggerated as the fellow-limb continues its normal growth. After resections, as after certain inflammatory lesions, a growth lengthwise of the limb operated on is sometimes observed. This lengthening is not accompanied by hypertrophy of the bone; it becomes, on the contrary, lighter. Hence M. Ollier has called this growth the atrophic lengthening. M. Ollier explains this anomaly by the diminution of the pressure which the bones exercise on one another. The diminution of this pressure leads, in fact, to an atrophic lengthening. This it is easy to observe in the bones of a paralyzed limb, but without waiting for that general atrophy which soon succeeds the functional inertia of the limb.—*Brit. Med. Journ.*, Sept. 28, 1872.

9. *Structure and Action of the Round Ligament of the Uterus.*—Notwithstanding the rather extensive literature that exists upon the subject of the Round Ligament of the Uterus, says Dr. E. L. SCHIFF in an article devoted to its consideration in the last part of Stricker's "Jahrbuch," there still remain several points to be cleared up. The round ligaments have long been known to contain both striated and unstriated muscular tissue; but considerable discrepancies occur in different authors in regard to the disposition of these fibres. The honour of being the discoverer of the round ligaments belongs to Carolus Stephanus, though they were first correctly described by the celebrated anatomist, Winslow. Meckel pointed out the presence of muscular fibres in them, though he only referred to the organic fibres continued upon them from the uterine walls. No less than sixteen authors have given detailed descriptions of the structure and relations of the round ligaments since Meckel's time. Amongst these Rosenberger may be specially mentioned as having distinguished three fasciculi of striated muscular fibres, of which two join with the fibres of the musculus transversus abdominis, one at the internal, the other at the external margin of the abdominal ring, whilst the third ends in a tendon that joins with the external limb of Poupart's ligament. A few other fibres, according to Rau, terminate in the mons veneris and vulva, whilst others are attached to the crista and symphysis pubis. As regards the function of the round ligaments, it was formerly held that they simply served to maintain the uterus in position. Rau, however, maintained that by means of their contraction the uterus was drawn down and fixed during the ninth month of pregnancy, keeping it in this position during the pains of labour. In this he was supported by